

Appendix L

Socioeconomics Analysis

L.1 INTRODUCTION

This appendix includes the supporting data used for assessing the alternatives in the socioeconomics sections of this *Draft Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility*. The socioeconomic analysis involved two major steps: (1) the characterization and projection of existing social, economic, and infrastructure conditions surrounding each of the candidate sites (i.e., the affected environment); and (2) the evaluation of potential changes in the socioeconomic conditions that could result from alternatives in the regions addressed (i.e., the environmental consequences). Data and analyses used to support the assessment made for the socioeconomic sections are presented in **Tables L–1 through L–27**.

The socioeconomic environment is defined for two geographic regions: the regional economic area and the region of influence. Regional economic areas are used to assess potential effects on the regional economy, and regions of influence are used to assess effects that are more localized in political jurisdictions surrounding the sites.

The regional economic areas for each site encompasses a broad market that involves trade among and between regional industrial and service sectors and is characterized by strong economic linkages between the communities in the region. These linkages determine the nature and magnitude of multiplier effects of economic activity (purchases, earnings, and employment) at each site. Regional economic areas are defined by the U.S. Bureau of Economic Analysis and consist of an economic node that serves as the center of economic activity and the surrounding counties that are economically related and include the places of work and residences of the labor force.

Potential demographic impacts were assessed for each region of influence, a smaller geographic area where the housing market and local community services would be most affected. Site-specific regions of influence were identified as those counties where approximately 90 percent of the current U.S. Department of Energy and contractor employees reside. This residential distribution reflects existing commuting patterns and attractiveness of area communities for people employed at each site and is used to estimate the future distribution of in-migrating workers.

**Table L–1 Oak Ridge Reservation Regional Economic Area
Employment and Economy, 2000–2040**

Regional Economic Area	2000	2005	2010	2020	2030	2040
Civilian labor force	493,669	526,450	549,317	593,551	642,649	697,307
Total employment	473,203	504,572	526,445	568,727	615,630	667,807
Unemployment rate (percent)	4.1	4.2	4.2	4.2	4.2	4.2

Source: DOL 2000; State of Tennessee 2000.

Table L–2 Oak Ridge Reservation Region of Influence Population, 2000–2040

County	2000	2005	2010	2020	2030	2040
Anderson	72,327	74,115	75,836	79,103	82,512	86,068
Knox	373,576	388,868	403,631	431,759	461,847	494,032
Loudon	39,526	42,126	44,718	49,988	55,880	62,467
Roane	50,897	52,596	54,427	58,107	62,035	66,229
Total	536,326	557,705	578,612	618,957	662,274	708,796

Source: Forstall 1995; State of Tennessee 2000.

Table L–3 Oak Ridge Reservation Region of Influence Total Number of Owner and Renter Housing Units, 2000–2040

County	2000	2005	2010	2020	2030	2040
Anderson	30,632	31,389	32,118	33,502	34,946	36,452
Knox	154,246	160,560	166,655	178,269	190,692	203,981
Loudon	14,562	15,520	16,475	18,417	20,587	23,014
Roane	21,578	22,299	23,075	24,635	26,301	28,079
Total	221,018	229,768	238,323	254,823	272,526	291,526

Source: DOC 1992; State of Tennessee 2000.

Table L–4 Oak Ridge Reservation Region of Influence Total Student Enrollment, 2000–2040

County	2000	2005	2010	2020	2030	2040
Anderson	6,849	7,018	7,181	7,491	7,814	8,150
Knox	52,266	54,405	56,471	60,406	64,616	69,119
Loudon	4,700	5,009	5,317	5,944	6,645	7,428
Roane	6,678	6,901	7,141	7,624	8,139	8,690
Total	70,493	73,333	76,110	81,465	87,214	93,387

Source: Davis 2000; Garza 2000; Groover 2000; McKinney 2000; Pierce 2000; State of Tennessee 2000.

Table L–5 Oak Ridge Reservation Region of Influence Total Number of Teachers, 2000–2040

County	Ratio of Students to Teachers	2000	2005	2010	2020	2030	2040
Anderson	13.2	518	531	543	567	591	616
Knox	17.3	3,014	3,137	3,256	3,483	3,726	3,986
Loudon	18.8	250	266	283	316	353	395
Roane	14.8	450	465	481	514	548	586
Total	16.7	4,232	4,399	4,563	4,880	5,218	5,583

Source: Davis 2000; Garza 2000; Groover 2000; McKinney 2000; Pierce 2000; State of Tennessee 2000.

Table L–6 Oak Ridge Reservation Region of Influence Total Number of Sworn Police Officers, 2000–2040

County	2000	2005	2010	2020	2030	2040
Anderson	158	162	165	173	180	188
Knox	1,159	1,207	1,253	1,340	1,433	1,533
Loudon	84	90	95	106	119	133
Roane	112	115	119	128	136	145
Total	1,513	1,574	1,632	1,747	1,868	1,999

Source: HPI 1999; State of Tennessee 2000.

Table L–7 Oak Ridge Reservation Region of Influence Total Number of Firefighters, 2000–2040

County	2000	2005	2010	2020	2030	2040
Anderson	282	289	296	308	322	336
Knox	615	640	664	711	760	813
Loudon	158	168	179	200	223	250
Roane	238	246	255	272	290	310
Total	1,293	1,343	1,394	1,491	1,595	1,709

Source: State of Tennessee 1998, 2000.

Table L–8 Oak Ridge Reservation Region of Influence Number of Hospital Beds, 2000–2040

County	2000	2005	2010	2020	2030	2040
Anderson	314	322	329	343	358	374
Knox	2,456	2,556	2,653	2,838	3,036	3,247
Loudon	56	60	64	71	79	89
Roane	156	161	167	178	190	203
Total	2,982	3,099	3,213	3,430	3,663	3,913

Source: AHA 1995; State of Tennessee 2000.

Table L–9 Oak Ridge Reservation Region of Influence Total Number of Doctors, 2000–2040

County	2000	2005	2010	2020	2030	2040
Anderson	185	190	194	203	211	221
Knox	1,349	1,404	1,458	1,559	1,668	1,784
Loudon	35	37	39	44	49	55
Roane	36	38	39	41	44	47
Total	1,605	1,669	1,730	1,847	1,972	2,107

Source: Randolph, Seidman, and Pasko 1995; State of Tennessee 2000.

Table L–10 INEEL Regional Economic Area Projected Employment and Economy, 2000–2040

Regional Economic Area	2000	2005	2010	2020	2030	2040
Civilian labor force	161,149	168,979	177,199	195,312	215,857	239,293
Total employment	153,440	160,884	168,784	186,110	205,777	228,228
Unemployment rate (percent)	4.8	4.8	4.7	4.7	4.7	4.6

Source: DOE 1999.

Table L–11 INEEL Region of Influence Projected Population, 2000–2040

County	2000	2005	2010	2020	2030	2040
Bannock	78,600	81,808	85,147	92,238	99,921	108,243
Bingham	44,426	46,236	48,120	52,120	56,453	61,146
Bonneville	85,650	89,154	92,802	100,552	108,949	118,048
Jefferson	20,609	21,646	22,736	25,082	27,671	30,527
Total	229,285	238,844	248,805	269,992	292,994	317,964

Source: DOE 1999.

Table L–12 INEEL Region of Influence Projected Number of Owner and Renter Housing Units, 2000–2040

County	2000	2005	2010	2020	2030	2040
Bannock	30,275	31,510	32,796	35,528	38,487	41,692
Bingham	15,138	15,754	16,396	17,759	19,236	20,835
Bonneville	31,215	32,493	33,822	36,647	39,707	43,023
Jefferson	6,643	6,978	7,329	8,085	8,920	9,841
Total	83,271	86,735	90,343	98,019	106,350	115,391

Source: DOE 1999.

Table L–13 INEEL Region of Influence Projected Student Enrollment, 2000–2040

County	Capacity (percent)	2000	2005	2010	2020	2030	2040
Bannock	86.5	15,413	16,042	16,697	18,088	19,594	21,226
Bingham	84.7	11,867	12,350	12,853	13,921	15,079	16,332
Bonneville	91.8	19,782	20,592	21,434	23,224	25,164	27,265
Jefferson	90.6	5,879	6,175	6,486	7,155	7,893	8,708
Total	88.4	52,941	55,159	57,470	62,388	67,730	73,531

Source: DOE 1999.

Table L–14 INEEL Region of Influence Projected Number of Teachers, 2000–2040

County	Ratio of Students to Teachers	2000	2005	2010	2020	2030	2040
Bannock	17.9	863	899	935	1,013	1,098	1,189
Bingham	18.2	653	680	707	766	830	899
Bonneville	20.1	982	1,022	1,064	1,153	1,249	1,353
Jefferson	18.4	319	335	352	388	428	473
Total	18.8	2,817	2,936	3,058	3,320	3,605	3,914

Source: DOE 1999.

Table L–15 INEEL Region of Influence Projected Number of Sworn Police Officers, 2000–2040

County	2000	2005	2010	2020	2030	2040
Bannock	225	234	244	264	286	310
Bingham	56	58	61	66	71	77
Bonneville	191	199	207	224	243	263
Jefferson	29	30	32	35	39	43
Total	501	521	544	589	639	693

Source: DOE 1999.

Table L–16 INEEL Region of Influence Projected Number of Firefighters, 2000–2040

County	2000	2005	2010	2020	2030	2040
Bannock	188	196	204	221	239	259
Bingham	152	158	165	178	193	209
Bonneville	157	164	170	185	200	217
Jefferson	94	99	104	114	126	139
Total	591	617	643	698	758	824

Source: DOE 1999.

Table L–17 INEEL Region of Influence Projected Number of Hospital Beds, 2000–2040

County	2000	2005	2010	2020	2030	2040
Bannock	434	452	470	509	552	597
Bingham	268	279	290	314	341	369
Bonneville	329	343	357	387	419	454
Jefferson	–	–	–	–	–	–
Total	1,031	1,074	1,117	1,210	1,312	1,420

Source: DOE 1999.

Table L–18 INEEL Region of Influence Projected Number of Doctors, 2000–2040

County	2000	2005	2010	2020	2030	2040
Bannock	146	152	158	171	186	201
Bingham	23	24	25	27	29	32
Bonneville	172	179	186	202	219	237
Jefferson	5	6	6	6	7	8
Total	346	361	375	406	441	478

Source: DOE 1999.

Table L–19 Hanford Regional Economic Area Projected Employment and Economy, 2000–2040

Regional Economic Area	2000	2005	2010	2020	2030	2040
Civilian labor force	369,570	393,230	418,465	474,108	537,475	609,694
Total employment	328,709	349,790	372,278	421,872	478,366	542,768
Unemployment rate (percent)	11.1	11.0	11.0	11.0	11.0	11.0

Source: DOE 1999.

Table L–20 Hanford Region of Influence Projected Population, 2000–2040

County	2000	2005	2010	2020	2030	2040
Benton	149,100	157,549	166,476	185,877	207,539	231,725
Franklin	50,683	54,562	58,738	68,074	78,893	91,432
Total	199,783	212,111	225,214	253,951	286,432	323,157

Source: DOE 1999.

Table L–21 Hanford Region of Influence Projected Number of Owner and Renter Housing Units, 2000–2040

County	2000	2005	2010	2020	2030	2040
Benton	58,217	61,516	65,002	72,577	81,035	90,479
Franklin	17,806	19,168	20,635	23,915	27,716	32,121
Total	76,023	80,684	85,637	96,492	108,751	122,600

Source: DOE 1999.

Table L–22 Hanford Region of Influence Projected Student Enrollment, 2000–2040

County	Capacity (percent)	2000	2005	2010	2020	2030	2040
Benton	90.7	30,427	32,151	33,972	37,932	42,354	47,289
Franklin	97.7	10,895	11,729	12,627	14,635	16,960	19,656
Total	92.5	41,322	43,880	46,599	52,567	59,314	66,945

Source: DOE 1999.

Table L–23 Hanford Region of Influence Projected Number of Teachers, 2000–2040

County	Ratio of Students to Teachers	2000	2005	2010	2020	2030	2040
Benton	15.8	1,929	2,039	2,153	2,405	2,685	3,000
Franklin	16.8	647	696	752	869	1,007	1,168
Total	16.0	2,577	2,734	2,905	3,274	3,692	4,168

Source: DOE 1999.

Table L–24 Hanford Region of Influence Projected Number of Sworn Police Officers, 2000–2040

County	2000	2005	2010	2020	2030	2040
Benton	225	238	251	280	313	350
Franklin	79	85	92	106	123	143
Total	304	323	343	386	436	493

Source: DOE 1999.

Table L–25 Hanford Region of Influence Projected Number of Firefighters, 2000–2040

County	2000	2005	2010	2020	2030	2040
Benton	399	422	445	497	555	620
Franklin	267	288	310	359	416	482
Total	666	710	755	856	971	1,102

Source: DOE 1999.

Table L–26 Hanford Region of Influence Projected Number of Hospital Beds, 2000–2040

County	2000	2005	2010	2020	2030	2040
Benton	271	287	303	338	378	422
Franklin	143	154	166	192	222	258
Total	414	441	469	530	600	680

Source: DOE 1999.

Table L–27 Hanford Region of Influence Projected Number of Doctors, 2000–2040

County	2000	2005	2010	2020	2030	2040
Benton	225	238	251	280	313	350
Franklin	53	57	61	71	83	96
Total	278	295	312	351	396	446

Source: DOE 1999

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